

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Currently Amended) A storage control device comprising:

a first I/O control unit including a channel control unit ~~being connected~~ coupled ~~to with an information processing device to communicate data~~ and receiving a data I/O request from the information processing device, a disk control unit ~~being connected with one or more HDDs (Hard Disk Drives) storing data and reading/writing data from/to the HDDs according to the data I/O request,~~ and a cache memory for storing data communicated between the channel control unit and the disk control unit, ~~and a connection unit interconnecting the channel control unit, the disk control unit and the cache memory to communicate data;~~

a second I/O control unit whose current consumption is approximately equal to that of the first I/O control unit;

two or more first AC/DC (Alternating-Current/Direct-Current) power supply devices receiving AC power and supplying ~~electric~~ DC power to the first I/O control unit;

two or more second AC/DC power supply devices receiving AC power and supplying ~~electric~~ DC power to the second I/O control unit; and

at least three AC power supply devices each having a circuit breakers that
~~receiving~~receives ~~electric~~ AC power supplied from outside and ~~supplying~~ supplies
the ~~electric~~ AC power to the first and second AC/DC power supply devices, and while
~~interrupting~~ interrupts the supply of the ~~electric~~ AC power when current exceeding a
preset level passes, wherein:

if one of the at least three AC power supply devices stops supplying power,
other ones of the at least three AC power supply devices cause both of the first and
second I/O control units to conduct, and

each of the first/ and second AC/DC power supply devices includes a current
balancing circuit ~~for that is used to equalize~~ equalizing output currents ~~of supplied~~
from the first/ and second AC/DC power supply devices to the first and second I/O
control units even if the one of the at least three AC power supply devices stops
supplying power.

2. (Currently Amended) The storage control device according to claim 1,
wherein:

~~the electric power supplied from outside to the circuit breakers is AC~~
~~(Alternating Current) power, and~~

the first AC/DC power supply device includes an AC-DC conversion unit for
converting the AC power into DC ~~(Direct Current)~~ power and thereby supplies the DC
power to the first I/O control unit, and

the second AC/DC power supply device includes an AC-DC conversion unit for converting the AC power into DC power and thereby supplies the DC power to the second I/O control unit.

3. (Currently Amended) The storage control device according to claim 1, wherein:

the ~~electric~~-AC power supplied from outside to ~~the~~each circuit breakers is three-phase AC (~~Alternating Current~~) power, and

each circuit breaker interrupts the supply of the ~~electric~~-AC power of a phase of the three-phase AC power, when current of the phase exceeds a the preset level, and

the first AC/DC power supply device includes three AC-DC conversion units corresponding to the three phases for converting the AC power of each phase into DC (~~Direct Current~~) power and a the current balancing circuit ~~for equalizing that is used to equalize~~ output currents of the three phases, ~~while so as to equalize~~ equalizing output currents ~~of~~ supplied from the first and second AC/DC power supply devices to the first and second I/O control units, and

the second AC/DC power supply device includes three AC-DC conversion units corresponding to the three phases for converting the AC power of each phase into DC power and a the current balancing circuit ~~for that is used to equalizing~~ equalize output currents of the three phases, ~~while so as to equalize~~ equalizing

output currents ~~of~~ supplied from the first and second AC/DC power supply devices to the first and second I/O control units.

4. (Currently Amended) The storage control device according to claim 1, wherein:

the storage control device comprises a number of a plurality of the first and second AC/DC power supply devices not less than the number of the circuit breakers at least three AC power supply devices and ~~a plurality of the second power supply devices not less than the number of the circuit breakers, and~~

the number of the first AC/DC power supply devices is equal to ~~that~~ the number of the second AC/DC power supply devices, and

each of the circuit breakers at least three AC power supply devices supply supplies the electric AC power to different ones of the first and second AC/DC power supply devices, and

~~each of the first/second power supply devices includes a current balancing circuit for equalizing output currents of the first/second power supply devices.~~

5. (Currently Amended) The storage control device according to claim 1, wherein:

the electric AC power supplied from each of the circuit breaker at least three AC power supply devices is supplied to both one of the first AC/DC power supply

devices and one of the second AC/DC power supply devices through electric cables that detachably connect one of the circuit breaker at least three AC power supply devices to the one of the first and AC/DC power supply devices and the one of the second AC/DC power supply devices.

6. (Currently Amended) A storage control device comprising:

a first I/O control unit including a channel control unit ~~being connected~~ coupled ~~to with~~ an information processing device ~~to communicate data and~~ receiving a data I/O request from the information processing device, a disk control unit ~~being~~ connected with one or more HDDs (Hard Disk Drives) storing data and reading/writing data from/to the HDDs according to the data I/O request, ~~and~~ a cache memory for storing data communicated between the channel control unit and the disk control unit, ~~and a connection unit interconnecting the channel control unit, the disk control unit and the cache memory to communicate data;~~

a second I/O control unit whose current consumption is approximately equal to that of the first I/O control unit;

the HDDs;

a first AC/DC (Alternating-Current/Direct-Current) power supply device including three AC-DC conversion units corresponding to three phases of three-phase AC ~~(Alternating-Current)~~ power for converting the AC power of each phase into DC ~~(Direct-Current)~~ power, the first AC/DC power supply device supplying the

DC power to the first I/O control unit;

a second AC/DC power supply device including three AC-DC conversion units corresponding to three phases of three-phase AC power for converting the AC power of each phase into DC ~~(Direct Current)~~ power, the second AC/DC power supply device supplying the DC power to the second I/O control unit;

at least three AC power supply devices each having a circuit breakers receiving that receives the three-phase AC power supplied from outside and supplying supplies the three-phase AC power to the first and second AC/DC power supply devices, while interrupting and interrupts the supply of the electric AC power of a phase of the three-phase AC power when current of the phase exceeds a preset level, wherein:

if one of the at least three AC power supply devices stops supplying AC power, other ones of the at least three AC power supply devices can cause both of the first and second I/O control units to conduct.

~~the storage control device comprises a plurality of a number of~~ the first and second AC/DC power supply devices not less than the number of the circuit breakers at least three AC power supply devices and ~~a plurality of a number of~~ the second AC/DC power supply devices not less than the number of the at least three AC power supply devices ~~circuit breakers~~, and

the number of the first AC/DC power supply devices is equal to ~~that the~~ number of the second AC/DC power supply devices, and

the three-phase AC power supplied from each circuit breaker of the at least three AC power supply device is supplied to the first and second AC/DC power supply devices through electric cables that detachably connect one of the at least three AC power supply device circuit breakers to different ones both one of the first AC/DC power supply devices and one of the second AC/DC power supply devices, and

the first AC/DC power supply device includes a current balancing circuit ~~for~~ that is used to equalizing equalize output currents of supplied from the three phases to the first or second I/O control unit, while so as to equalize equalizing output currents of supplied from the first and second AC/DC power supply devices to the first and second I/O control units, and

the second AC/DC power supply device includes a current balancing circuit ~~for equalizing~~ that is used to equalize output currents of supplied from the three phases to the first or second I/O control unit, while so as to equalize equalizing output currents of supplied from the first and second AC/DC power supply devices to the first and second I/O control units.

7. (Currently Amended) A control method for a storage control device which is provided with:

a first I/O control unit including a channel control unit ~~being connected coupled~~ to with an information processing device to communicate data and receiving a data

I/O request from the information processing device, a disk control unit being connected with one or more HDDs (Hard Disk Drives) storing data and reading/writing data from/to the HDDs according to the data I/O request, and a cache memory for storing data communicated between the channel control unit and the disk control unit, ~~and a connection unit interconnecting the channel control unit, the disk control unit and the cache memory to communicate data;~~

a second I/O control unit whose current consumption is approximately equal to that of the first I/O control unit;

two or more first AC/DC (Alternating-Current/Direct-Current) power supply devices receiving AC power and supplying electric-DC power to the first I/O control unit;

two or more second AC/DC power supply devices receiving AC power and supplying DC electric-power to the second I/O control unit; and

at least three AC power supply devices ~~circuit breakers~~ receiving electric-AC power supplied from outside and supplying the ~~electric-AC~~ power to the first and second AC/DC power supply devices, while and interrupting the supply of the electric AC power when current exceeding a preset level passes, the method comprising the steps of:

if one of the at least three AC power supply devices stops supplying AC power, supplying AC power from another one of the at least three AC power supply devices so as to cause both of the first and second I/O control units to conduct, and

_____controlling output current of each of the first and second AC/DC power supply devices so as to equalize output currents ~~of~~ supplied from the first and second AC/DC power supply devices and those of the second power supply devices to both of the first and second I/O control units.

8 . (Currently Amended) A storage control device comprising:

a first I/O control unit including a first channel control unit ~~being connected coupled to with~~ an information processing device ~~to communicate data~~ and receiving a data I/O request from the information processing device, a first disk control unit ~~being connected~~ with one or more HDDs (Hard Disk Drives) storing data and reading/writing data from/to the HDDs according to the data I/O request, and a first cache memory for storing data communicated between the first channel control unit and the first disk control unit, ~~and a connection unit interconnecting the channel control unit, the disk control unit and the cache memory to communicate data;~~

a second I/O control unit including a second channel control unit, a second disk control unit and a second cache memory ~~whose current consumption is approximately equal to that of the first I/O control unit;~~

two or more first AC/DC (Alternating-Current/Direct-Current) power supply devices receiving AC power and supplying electric DC power to the first I/O control unit;

two or more second AC/DC power supply devices receiving AC power and

supplying ~~electric-DC~~ power to the second I/O control unit; and

at least three AC power supply devices ~~circuit breakers~~ receiving ~~electric-AC~~ power supplied from outside and supplying the ~~electric-AC~~ power to the first and second AC/DC power supply devices, ~~and~~ while interrupting the supply of the ~~electric~~ AC power when current exceeding a preset level passes, wherein:

if one of the at least three AC power supply devices stops supplying AC power, other ones of the at least three AC power supply devices cause both of the first and second I/O control units to conduct, and

each of the at least three AC power supply devices ~~three circuit breakers~~ includes a current balancing circuit ~~for that is used to equalizing equalize~~ output currents ~~of supplied from the~~ at least three AC power supply devices ~~three circuit breakers~~ to both of the first and second AC/DC power supply devices.